

NO. 2

BIO-RESEARCH CONSULTANTS, INC.

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R E P O R T

to

PHILIP MORRIS INCORPORATED

Report No. 10

Contract C-172

Covering the period:

December 1st, 1967 to December 31st, 1967

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Distribution:

To Client: Dr. Wakeham - Original

Dr. Osdone - Copy No. 2

Copy No. 3

(additional copies numbered 4-10 For Internal Use Only)

Date January 8th, 1968

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2 pages, 1 tables and

3 figures.

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### NITRITES

Pilot experiments were done in rabbits on the effect of nitrite administered intravenously into an ear vein. Approximately one-fifth of the minimum lethal dose (50 mg for a 6 to 8 lb. rabbit) produced a marked dilatation of the main and branching arteries of the opposite ear within 5 to 10 minutes. Since the dose used is of the order of magnitude of the amounts that can be expected to be absorbed by a rabbit from nitrited cigarettes (based on our earlier experiments), this method (using rabbits) holds promise for studies of nitrite effects. However, a method to quantitate the observed effect will have to be developed.

### ATROPINE STUDY

Considerable progress has been made in developing a device to immobilize mice in such a way as to make it possible to collect their saliva and to measure quantitatively the amounts of saliva produced under resting conditions.

The attached photographs show the stancion in its present stage of development with the mice in place. The cork rings used in this present version have been found more acceptable than other forms of halters.

The strips which are used to receive the saliva are placed into the mouth of the mouse by means of a wire bit. Phenolphthalein is now used as an indicator which colors the saliva as it diffuses along the strip. The length of the diffusing colored band is measured in mm and indicates the amount of saliva secreted.

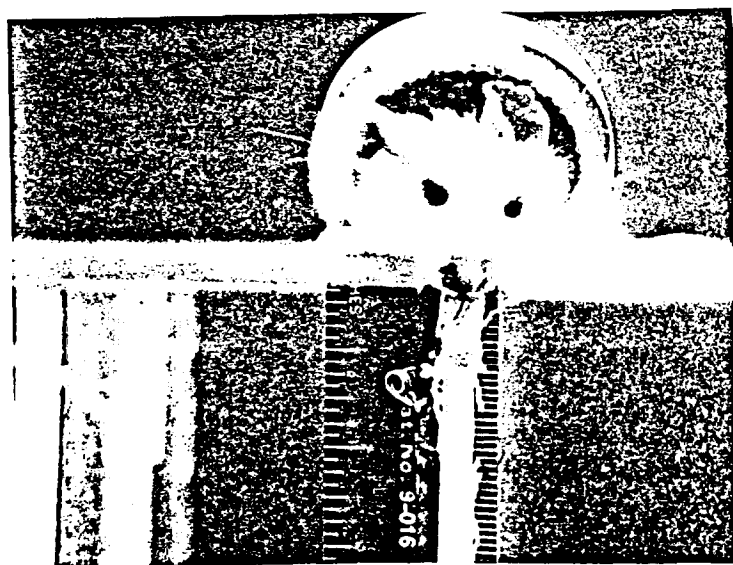
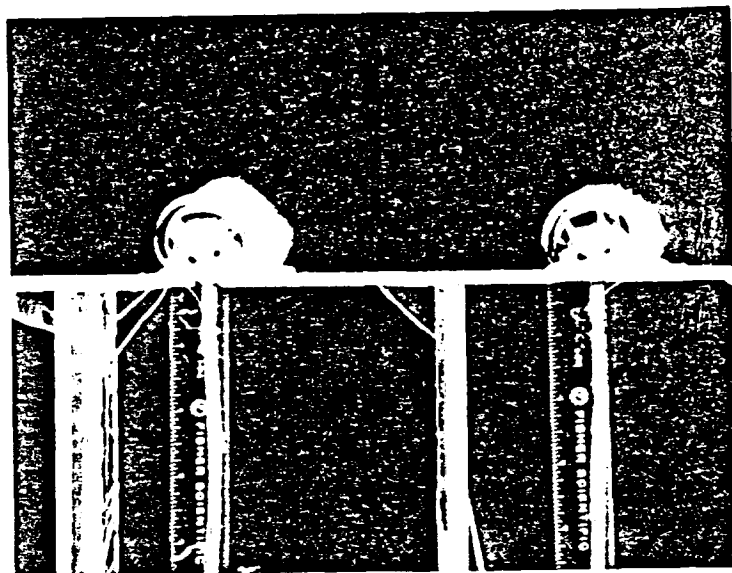
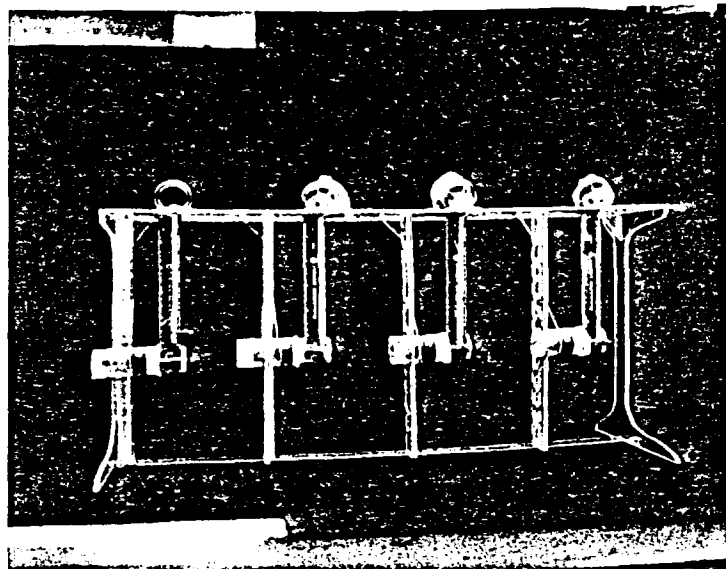
The stancion now in use is the fifth modification that has been constructed. The tape used is one of seven materials tested. It is a 100% cotton superfine Twill tape, Talon®, T 75 white 020, distributed by the Donahue Sales Corporation.

We are beginning to obtain data showing that salivation can be measured in mice with reproducible results. Furthermore, it begins to appear that mice accustomed to the procedure salivate more abundantly than those performing for the first time.

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We are now convinced, after a search of the literature and after observing the development of this new method by Dr. Van Dongen, that this procedure will constitute a significant and useful contribution to experimental pharmacology. It will be the first time that salivation can be measured quantitatively in mice under non-traumatic conditions, and pharmacological and psychological factors affecting it (including smoking) can therefore be measured in statistically significant populations.

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